

March 9, 2004

Commissioner for Patents P.O.Box 1450 Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572 28 Davis Avenue Poughkeepsie, N.Y. 12603

Subject:

Serial No. 10/766,596 01/27/04

Baw-Ching Perng et al.

ZIRCONIUM OXIDE AND HAFNIUM OXIDE ETCHING USING HALOGEN CONTAINING CHEMICALS

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation In An Application.

The following Patents and/or Publications are submitted to comply with the duty of disclosure under CFR 1.97-1.99 and 37 CFR 1.56.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on March (6, 2004.

Stephen B. Ackerman, Reg.# 37761

Signature/Date Jan 2510

TSMC-02-405

U.S. Patent 6,306,715 to Chan et al., "Method to Form Smaller Channel with CMOS Device by Isotropic Etching of the Gate Materials," describes a method for isotropically etching a metal oxide such as HfO2.

The following two U.S. Patents provide for a method of removing a high k dielectric layer such as Ta205, Zr02, and Hf02 by reducing the metal oxide to a metal or to a metal hydride which is then etched by an acid solution:

- 1) U.S. Patent 6,300,202 to Hobbs et al., "Selective Removal of a Metal Oxide Dielectric."
- 2) U.S. Patent 6,432,779 to Hobbs et al., "Selective Removal of a Metal Oxide Dielectric."
- U.S. Patent 6,297,539 to Ma et al., "Doped Zirconia, or Zirconia-Like, Dielectric Film Transistor Structure and Deposition Method for Same," describes a means of improving the electrical properties of ZrO2 and HfO2 by doping with a trivalent metal.

Sincerely

Stephen B. Ackerman, Reg. No. 37761

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